

"Things are more like they are now
than they have ever been before."
— Dwight D. Eisenhower

NOTES FOR



13

PUBLISHED BY

The Code
Works™

BOX 550 / GOLETA, CALIFORNIA 93017

A CURSORY GLANCE

The computer revolution goes on - and you are part of it. "Revolution" is a pretty strong word, but I think it is well chosen. Let me share an example or two with you: I have the pleasure of reviewing a lot of programs submitted by Cursor subscribers. The submitted material runs the full gamut from absolute trash to very well written programs. What excites me is that some of our best submissions come from folks who didn't know how to spell computer a few weeks or months ago. We set letters such as "...this is the second program I've ever written...", and sometimes find a fresh and well thought-out program idea. On the other hand, some of our fellow professionals in the ranks of the computing "priesthood" also submit programs. Some are good, some are not worth the trouble of loading into the Pet.

Make no mistake! I'm not claiming that each and every Joe and Sally Six-Pak are potential Kernishans or Knuths. Nor do I propose that a Pet in every garage will turn billions of novice programmers into accomplished computer scientists. But there are far more people that are able to take these "dinky machines" and do creative, useful and fun things with them than most of us ever imagined.

So what? For one thing, over the next few years, small computers will become much more important than they are now. Sure, Radio Shack has sold maybe 200,000 TRS-80 units, and industry sources think that Apple and Commodore have each sold about 50,000 computers. Plus, the long awaited Atari is finally available at Sears, J. C. Penny and Wards (but only on the West Coast right now). Sears plans to sell 100,000 Ataris in the first year, and we might expect half that many to be sold by Wards and Penny's combined. Then again, the TI personal computer will soon be on the shelf, and though it is rather strange in many ways, it can't be discounted either. If you have not "experienced" a TI Speak 'n Spell set to your nearest dealer and do so right away. TI appears to have an important lead in producing speech inexpensively. Their personal computer will have an optional voice output device.

If you subscribe to Cursor, you obviously either own a Pet or have access to one. But what about the school that your children attend? With the computer revolution that is now taking place, it verges on criminal neglect to not have at least one personal computer in every elementary school classroom. "Computer literacy" must be a required part of the curriculum in each and every elementary, Junior high and high school. What can you do? Talk to your principal, and to your child's teachers. Take a Pet to school and show them your favorite Cursor programs. Let them know that you care what kind of learning opportunities they are providing in the area of computing.

Another thing you can do is to share your computer with some kids that don't have one in their home. Consider giving a short course for your local Girl's Club, Boy's Club or other youth organization. Sure, you may not be an "expert", but you can share what you do know, and be pleasantly surprised at how quickly the kids will be teaching you things about your Pet.

THE "GREEN CARD"

Leading Edge Computer Products has published a folding card of useful information about the Pet called the Pocket Reference Guide To Commodore's 2001 PET. There are nine "panels" (3 1/2 by 8 inches) of information that describe Pet Basic, the operating system, the Pet monitor, input and output "I/O", the status byte, etc. There is a handy table of "useful memory locations", with values in both decimal (for peeks and pokes), and hex (for machine language fanatics). One of the panels is particularly important: it displays the entire Pet character set in a table that makes it very easy to find the correct CHR\$ value or the appropriate screen code. (They ought to include a short note with the card that tells how to read this table. If you aren't a computer nut, it might take a while to realize that you add the value at the top of the column to the value in that row to get the final number.) The card is \$3.50 from your local dealer, or from Leading Edge at 4471 Santa Monica Blvd, Los Angeles, CA 90029.

THE CODE WORKS(™)

As Cursor enters its second year of publication, we are planning several new products. For one thing, we are adding a cassette magazine for the Atari called "IRIDIS". We are also working on some exciting software for the Pet (in addition to Cursor). We have a new name - "The Code Works(™)" - but Cursor will remain the same: the best software value available for the Pet.

CURSOR 13 HAS THESE PROGRAMS:

COVER13	Chuck Bond (of Programmer's Toolkit fame) created this display of two fish swimming.
RATRUN	You are a rat in a maze (shown in perspective), and are trying to find the cheese. By C. T. Nadovich.
CARS	A program that will assist you in maintaining cost records for one or more cars. By John Grove.
FERRY!	Try to ferry supplies across the asteroid belt. Has great sound effects. By Dr. John J. Matarella.
LEAP	A challenging logic game: try to remove all but one peg. Idea by Sheila Dolsowich.
TCARD	A convenient tool for wading through mounds of time cards. Idea by Herb Sandy.

CURSOR 13 was edited by Glen Fisher, with assistance from Dave Platten and Diane Grove.

MORE ABOUT THE PROGRAMS

COVER13... This interesting animated cover showing two fish swimming was written by Chuck Bond, who created the Basic Programmer's Toolkit that is marketed by Palo Alto ICs.

RATRUN... You are a rat in a maze, and are being tested on how intelligent you are about finding a piece of cheese. The maze is shown in perspective, just like it would look to the rat. There are five commands: press **8** to move ahead in whatever direction you are facing. Press **4** to turn left, or **6** to turn right. If you press **2** you will turn around 180 degrees. Note that only 8 actually moves you, (4, 6 and 2 only turn you in place). Finally, if you want to see where you have been, and have another maze generated, you can press the question mark **?**. As an aside, this program was submitted as two programs, each close to 8K long. Glen Fisher performed open heart surgery, and made it all fit in 8K, with a few bytes left over. One result is that the program has only sketchy directions. We will warn you that RATRUN is one of those programs that consume several hours of your time, and that some people are so fascinated by the program that it is hard to pry them away from the PET.

CARS... This is a cost accounting system which accumulates cash expenditures and pro-rates fixed, long-term expenditures to determine the actual cost of operation on a periodic basis. You can carry accumulated year-to-date figures from one month to the next on cassette tape if you wish. (Naturally, the tape data files will work on both the old and new Pets). The program maintains information on up to three vehicles. If you have more than 8K, you can change the variable 'T' in the program.

CARS is an example of a program that could have been much nicer if it was written for a 16k system. For example, there is not the level of checks of valid input values that we normally like, and the prompts are a bit terse in several places. In fact, it took a great deal of work to make CARS work in a useful fashion in 8K. The first question asked by CARS is whether the previous month's data is on tape. Of course the answer will be "no" the first time you use the system. The next question asks whether you want to add or change vehicle names, or the fixed expense data for each vehicle. The first time through, you will want to put new names into the system, so select option 1. It will display three lines, and ask you what you want to do. For example, you might press '1', then press RETURN, and then type the name of the car. (For ease of use, use short names for your vehicles. When asked for the names later on, you must spell them exactly as entered.) When you have added all the cars that you want in the system, press RETURN. You will be asked if everything is OK. If you need to change anything, enter the index number that is beside the item.

When you add or correct the fixed expense data, you must have first defined a valid vehicle name, (since the fixed expenses are associated with a specific car). First, the existing data will be displayed. You may keep it "as is" by hitting RETURN, or change it by entering the new value, and then RETURN. The fixed expense items are: 1) INSURANCE: actual insurance cost for one year. 2) LEASED OR OWNED: enter the yearly lease charge (which includes depreciation and finance charges). 3) VALUE: enter the estimated current value for each car you own. 3) DEPRECIATION: the percentage that you expect the car to depreciate in one year. New cars, for example, depreciate at 20 to 30 percent the first year. Ouch! (If you have a classic car that is appreciating, enter a negative depreciation. 5) FINANCE CHGS: if you are still paying for the car, enter the part of your payment that represents interest of finance charges. 6) LICENSE/CLUBS: enter yearly auto club, license and other fees.

Next, you will choose the units that data will be entered (such as miles and gallons), as well as the output units. Finally, you need to enter your monthly expenses for Fuel, Oil, and Miscellaneous. The first question you are asked is whether the beginning mileage is already in memory. If you keep data on tape, it will be, otherwise it won't. Note that when you enter fuel data, the ending point for the month should be the last time you filled the tank, NOT the last day of the month. After you have entered all the fuel data, press RETURN. You'll have a chance to correct any data item by entering its "index number". A limitation of the program is that it will only handle 30 entries per car.

Now we are ready to see the results as a summary on the screen. (Sorry, there was not room for a printer routine.) After looking over the reports, you are ready to save the data on tape if you wish. We strongly suggest that you alternate between two tapes, so that if something goes bonkers with your machine, you won't lose more than one month's data. (Always, ALWAYS "back-up" important data. Computers (and sometimes people) do fail!) One last comment: you'll need to keep a notebook in your car and record the mileage, number of gallons and cost of each purchase of gasoline, also, charges such as oil, repairs etc. should be recorded. Once you get in the habit, it isn't hard. (But when you find out what it really costs to operate your car you may cringe...)

FERRY!... You control five "drone" space ships by pressing **6** to go forward or **4** to go back (left). Hope you have CB2 sound!!!

LEAP... a great puzzle: you try to jump pegs, and clear the board of all but one. (Current world record: 2 pegs left in 4 minutes and 28 seconds. Enjoy.

TCARD... If you have experienced the drudgery of wading through a stack of time cards, you'll appreciate this practical program. If you are writing your own programs, you might want to study how we've handled the problem of entering time values in an easy yet fool-proof way.

2040 DISK UPDATE

I have good news, as well as some information that may save you some grief. First, the good news: about three weeks ago our 2040 began to malfunction. At first, we were not able to make it fail for our local dealer, and so it was hard to set it fixed. We tried to control all of the variables, and discovered that it was much worse after it had run for several hours. (We have the 2040 that does not have air vents on top, as all of the newer models do.) So, we began keeping the cover up, and were able to use it somewhat longer, but would still get failures. Back to the dealer, who ran tests and was able to make it fail. But, after some calls to the service folks at Commodore, there still wasn't an answer that made it function right. Well, a technician at our dealer did what good technicians do when faced with a known problem and no obvious solution: he started swapping chips. Guess what: after he replaced the 6504 processor, it was healed! Evidently, the 6504 in our unit was marginal, and misbehaved when hot.

Since that hardware glitch has been fixed, and since we have quit using the 'Q' to replace files on the disk, we've had excellent results.

Two quick comments: 1) I strongly advise that you NOT use the @ e.s. SAVE "@0:BLAT",8, as a way to replace files. Instead, scratch the old copy, then save the new copy. 2) If you Duplicate with the target disk being write protected, be sure and reset the 2040 by removing both diskettes and turning it off, and then back on. Otherwise you may damage other disks.

I realize that not using @ on SAVES is a pain, but if it keeps even an occasional problem from occurring it is well worth it!